

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(Currently Amended) A three-dimensional wire-woven cellular light structure formed of six groups of orientational-continuous-wires intercrossed with each other at 60 degrees or 120 degrees of angles in a three-dimensional space, a unit cell of the cellular light structure comprising:

a) a first regular tetrahedron member formed of a first to sixth wires, the first regular tetrahedron member being constructed in such a manner that the first wire ~~4~~, the second wire ~~5~~, and the third wire ~~6~~ are intercrossed in a plane to form an equilateral triangle, the fourth wire ~~7~~ is intercrossed with the intersection point of the second wire ~~5~~ and the third wire ~~6~~, the fifth wire ~~8~~ is intercrossed with the intersection point of the first wire ~~4~~ and the second wire ~~5~~, and the sixth wire ~~9~~ is intercrossed with the intersection point of the third wire ~~6~~ and the first wire ~~4~~, the fourth wire ~~7~~, the fifth wire ~~8~~, and the sixth wire ~~9~~ being intercrossed with one another at a single reference intersection point; and

b) a second regular tetrahedron member contacted with the first regular tetrahedron member at the reference intersection point and having a similar shape to the first regular tetrahedron member, the second regular tetrahedron member being constructed in such a manner that the fourth wire ~~7~~, the fifth wire ~~8~~, and the sixth wire ~~9~~ pass the reference intersection point and extend further, each of a group of wires ~~4'~~, ~~5'~~, and ~~6'~~ is intercrossed with two wires selected from the extended fourth, fifth and sixth wires, the group of wires ~~4'~~, ~~5'~~ and ~~6'~~ being in parallel with the first wire ~~4~~, the second wire ~~5~~, and the third wire ~~6~~ respectively;

c) wherein the wires are intercrossed with each other at 60 degrees or 120 degrees, and the unit cell is repeated in a three-dimensional pattern, thereby forming a truss-type structure.

2.(Original) A cellular light structure according to claim 1, wherein, among the six groups of orientational-wires, three groups of orientational-wires forming a vertex of the first or second

regular tetrahedron member are intercrossed clockwise or counterclockwise when seen from the front of the vertex.

3.(Original) A cellular light structure according to claim 1, wherein the first and second regular tetrahedron members have a similarity ratio of 1:1.

4.(Original) A cellular light structure according to claim 1, wherein the first and second regular tetrahedron members have a ratio of similarity in the range of 1:1 to 1:10.

5.(Original) A cellular light structure according to claim 1, wherein the wires are any one selected from the group consisting of metal, ceramics, synthetic resin, and fiber-reinforced synthetic resin.

6.(Original) A cellular light structure according to claim 1, wherein the intersection point of the wires is bonded by any one selected from the group consisting of a liquid- or spray-form adhesive, brazing, soldering, and welding.

7.(Currently Amended) A reinforced composite material manufactured by filling with a resin, a ceramic or a metal the empty space of the three-dimensional wire-woven cellular light structure according to ~~any one of claims 1 to 6~~ claim 1.

8.(Original) A reinforced composite material manufactured by filling with a resin, a ceramic or a metal the empty space of a smaller regular tetrahedron member among the first and second regular tetrahedron members, which constitutes a unit cell of the three-dimensional wire-woven cellular light structure according to claim 4.

9. (Currently Amended) A method of fabricating a three-dimensional wire-woven cellular light structure formed of six groups of orientational-continuous-wires intercrossed with each other at

60 degrees or 120 degrees of angles in a three-dimensional space, the method comprising steps of:

- a) forming an equilateral triangle by intercrossing a first wire 4, a second wire 5, and a third wire 6 in a plane;
- b) forming a first regular tetrahedron member by intercrossing a fourth wire 7 with the second wire 5 and the third wire 6, intercrossing a fifth wire 8 with the first wire 4 and the second wire 5, intercrossing a sixth wire 9 with the third wire 6 and the first wire 4, and intercrossing the fourth wire 7, the fifth wire 8, and the sixth wire 9 through a single reference intersection point;
- c) forming a second regular tetrahedron member contacted with the first regular tetrahedron member at the reference intersection point and having a similar shape to the first regular tetrahedron member by passing and extending the fourth wire 7, the fifth wire 8, and the sixth wire 9 through the reference intersection point, and intercrossing each of a group of wires ~~4', 5', and 6'~~ with two wires selected from the extended fourth, fifth and sixth wires, the group of wires ~~4', 5' and 6'~~ being in parallel with the first wire 4, the second wire 5, and the third wire 6 respectively; and
- d) repeatedly forming the first and second regular tetrahedron member to thereby form a truss-type structure.

10.(Original) A method according to claim 9, wherein, among the six groups of orientational-wires, three groups of orientational-wire forming a vertex of the first or second regular tetrahedron member are intercrossed clockwise or counterclockwise when seen from the front of the vertex.

11.(Original) A method according to claim 9, wherein the first and second regular tetrahedron members have a similarity ratio of 1:1.

12.(Original) A method according to claim 9, wherein the first and second regular tetrahedron members have a ratio of similarity in the range of 1:1 to 1:10.

13.(Original) A method according to claim 9, wherein the wires are any one selected from the group consisting of metal, ceramics, synthetic resin, and fiber-reinforced synthetic resin.

14.(Original) A method according to claim 9, further comprising a step of bonding the intersection point of the wires, wherein the intersection points of the wires are bonded by any one selected from the group consisting of a liquid- or spray-form adhesive, brazing, soldering, and welding.

15.(Currently Amended) A method of manufacturing a reinforced composite material by filling with a resin, a ceramic or a metal the empty space of a three-dimensional wire-woven cellular light structure manufactured according to ~~any one of claims 9 to 14~~: claim 9.

16.(Original) A method of manufacturing a reinforced composite material by filling with a resin, a ceramic or a metal the empty space of a smaller regular tetrahedron member among the first and second regular tetrahedron members, which constitutes a unit cell of a three-dimensional wire-woven cellular light structure manufactured according to claim 12.